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Memorandum

To: John Bunyak
Acting Chief, Air Resources Division, National Park Service

From: Ed Roberson
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Bureau of Land Management

Subject: Comments to Draft Federal Land Managers' Air Quality Related Values
Workgroup (FLAG) Phase I Report—Revised.

Attached are the Bureau of Land Management's comments to the Draft Federal Land Managers' Air Quality Related Values Workgroup (FLAG) Phase I Report-Revised. These comments are submitted in response to the Federal Register request dated July 8, 2008.

If you have questions or comments, please contact Nancy Dean, Chief, Division of Environmental Quality and Protection, at (202) 452-5060 or Angela Zahniser, Air Resource Specialist, at (202) 452-0327.

Attachment

**Bureau of Land Management's Comments to Draft Federal Land Managers' Air Quality
Related Values Workgroup (FLAG) Phase I Report-Revised**

- While the information and procedures outlined in the revised “FLAG” guidance are applicable to evaluating the effect of new or modified Prevention of Significant Deterioration (PSD) sources on the Air Quality Related Values (AQRVs) in both Class I and Class II areas, the Bureau of Land Management (BLM) generally supports most of their applications in the evaluation of effects as part of the review of Environmental Impact Statements (EISs) under the National Environmental Policy Act (NEPA).
- Please clarify how the authors intend FLAG to be used in NEPA, as noted in footnote 1.
- In the intermountain West, future air quality in Class I areas is as likely to be impacted by emissions increases from small area and mobile sources associated with oil and gas development as from emissions from major stationary point sources subject to the PSD program. While these sources are typically not subject to state permitting requirements, they are often reviewed under NEPA. As such, the revised FLAG guidance should more thoroughly discuss the application of the information and procedures contained therein to these sources. In particular, any limitations particular to NEPA review should be addressed.
- It would be beneficial to add more detail (beyond the footnotes) about all aspects of FLAG with regard to Class II areas and NEPA. For example, it is unclear whether FLAG believes that Class II areas are afforded any level of visibility protection. Please clarify.
- References are made to Class II areas. Are the FLAG authors referring to sensitive Class II areas such as federal recreation areas, national monuments, Non-Class I wilderness areas, national lakeshores/seashores, etc. – as opposed to Class II urban areas? Please clarify.
- For clarity, the guidance should specify how the term “new or modified” is being used throughout the document, i.e. is it always being used within the context of the PSD program?
- The application of the annual emissions/distance (Q/D) test for proposed sources greater than 50 km from a Class I area to determine whether or not further visibility analysis is necessary seems appropriate. However, please provide information as to how the tests ($D = 50 \text{ km}$, $Q/D = 10$) were determined. In addition, clarification is needed where the guidance might be applied to a collection of small, geographically dispersed area sources (e.g., oil and gas developments) in a NEPA review.

- Would the Q/D be applied to potential cumulative impacts? Please clarify.
- The BLM supports the utilization of the most recent Environmental Protection Agency (EPA) estimates to determine annual average natural visibility conditions for Class I areas.
- For screening evaluations, the BLM supports the adoption of criteria derived from the 2005 Best Available Retrofit Technology (BART) guidelines that utilizes monthly average relative humidity adjustment factors to minimize the effects of weather on modeled visibility impacts.
- Page iv, FLAG 2008/Relative Humidity (RH) Adjustment Factor (Monthly average (with RH capped at 95%). The FLAG Agencies should consider changing the upper limit from 95% to 90% (this would cap the f(RH) value at 4.16 rather than 7.0). This almost doubling of the optical impact between 90 and 95% tends to overestimate modeled visual impacts, inconsistent with the assumed constraints of visibility theory (uniform illumination, etc.) and the regulatory limitation of evaluating man-made impacts (rather than natural meteorology). In addition, equipment manufactures often do not defend data collected above 90% RH.
- Pages 83-105. The guidance on deposition analysis thresholds (DATs) and concern thresholds for nitrogen and sulfur deposition impacts should more fully explain how each is to be used within the context of evaluating individual source versus cumulative impacts. Are the DATs considered a "Concern Threshold?" or are they merely "Analysis Thresholds?" Please clarify.
- The Atmospheric Deposition section would benefit by providing examples of cases where potential deposition would be considered adverse, and where potential deposition impacts would not be considered adverse. FLAG 2008 refers to "Deposition Analysis Thresholds" and "Concern Thresholds and Pollutant Exposures." Both procedures should provide references to the peer reviewed literature which concludes at what level potential deposition levels would be considered "adverse." No scientific basis is provided for "Deposition Analysis Thresholds" of nitrogen and sulfur as 0.01 and 0.005 kilograms/hectare/year (kg/ha/yr), respectively. An applicant is referred to separate data bases to gather "deposition" threshold level information. Consider stating: "Applicants with the potential to alter existing total atmospheric deposition levels (by emitting either SO₂ or NO_x pollutants) should contact the site specific Federal Land Manager directly to discuss their considerations."

- The adoption of criteria derived from the 2005 BART guidelines that sets a 98th percentile value to screen out roughly seven days of haze-type visibility impairment per year is an improvement over the FLAG 2000 Report. Use of the revised IMPROVE equation, and allowing a 2% exceedance per year is an improvement over the FLAG 2000 Report.
 - Page 34, Lines 28-34 (Visibility adverse impact level of 5% change in light extinction): The FLAG agencies indicate a 5% change in light extinction above assumed natural conditions at any PSD Class I area receptor (at the 98th percentile level, or more than about seven days per year) is based upon EPA's regional haze rule. However, the FLAG 2008 document should provide references to the peer reviewed literature which concludes that a 5% change is the threshold for adverse visibility impacts. Pitchford and Malm (1994) indicated a "1 deciview change is about a 10% change in extinction coefficient, which is a small but perceptible scenic change under many circumstances." A 5% change in light extinction is 1/2 of a just noticeable change in visibility.
 - Page 28 states: "Under the regulations promulgated for visibility protection (40 CFR §51.301 (x)) visibility impairment is defined as '...any humanly perceptible change in visibility (visual range, contrast, coloration) from that which would have existed under natural conditions.'"
- Comment: However, under NEPA, impacts from the proposed action and alternatives are compared against the existing environment, not the "natural" environment or conditions. This is contradictory to 40CFR §51.301 (x) as stated above. How can the FLMs resolve this issue?
- Section C.4, Ozone. The guidance should address the application of photochemical grid models to assess whether a group of sources may lead to phytotoxic ozone levels. While photochemical grid modeling is not used for PSD air permitting, it could be discussed within the context of State Implementation Plan revisions or NEPA review.
 - Pages 75-82 (Ozone Impact Analysis); This section could benefit by providing examples of cases where potential ozone impacts would be considered adverse, and where potential ozone impacts would not be considered adverse. It appears that if any ozone impact has already been observed, including growth loss (although adverse ozone impacts "can occur at hourly ozone concentrations that can be considered natural background levels"), any potential increase in ozone concentration would be considered adverse. Or if any ozone levels exceed (or could exceed) "phytotoxic" levels, any potential increase in ozone concentration would be considered adverse. An applicant is referred to two separate data bases to gather "phytotoxic" level information. The FLAG 2008 document should provide references to the peer reviewed literature which concludes at what level

potential ozone concentrations would be considered "phytotoxic." Consider stating: "Applicants with the potential to alter existing ozone concentrations (by emitting either NO_x or VOC pollutants) should contact the site specific FLM directly to discuss their considerations."

- BLM supports increasing the transparency and consistency of factors considered for adverse impact determinations.
- Many of the links in the document are broken and therefore should be updated. Suggest to check each one and update as needed.
- In general, the document is well written and the organization of the document makes it easy to reference needed information for decision-making purposes.

Specific Comments:

- Page ii, Line 4: To be consistent with Page vi, Line 24, insert the following: "... the Department of the Interior, hereafter referred to as "the Agencies [INSERT or the "FLMs."](#)"]
- Page ii, Lines 6-10: Delete the current sentences on lines 6-9 and replace with: "[BLM is not a member of FLAG. However, because BLM does manage federal PSD Class I lands, as well as large amounts of acres in the vicinity of many FLAG Agencies' Class I areas, they may apply, when appropriate, the assessment methodologies outlined in the FLAG report. Applicants with the potential to adversely impact visibility or other AQRVs at PSD Class I areas administered by the BLM should contact that agency directly to discuss their considerations.](#)" ...The Agencies review permit applications for projects that may impact their areas...
- Page iii, Line 17: ... Class I area (i.e., Q/D = 10) [\[INSERT for potential sources located greater than 50 km away\]](#).
- Page vi, Line 13: Class II. Maps of [\[INSERT the Agencies'\]](#) Federal Class I areas are provided in Appendix E.
- Pages x, xii, and xiv: Figures should indicate the Q/D test is valid only for potential sources located greater than 50 km away from the PSD Class I area.

- Pages vii-viii Footnote – There is no mention of Environmental Assessments. Is it assumed that saying EIS covers both? Please clarify.
- Page viii, 5th bullet: Please notate which EPA documents are being referred to in the second parenthetical.
- Table entitled “FLAG 2000 vs. FLAG Analyses.” Change “Assessment Criteria” to “Visibility Assessment Criteria.”
- Page 3: Question/Comment: With the large increase in NO_x emissions in the intermountain west since 1993, does the following statement still hold true? “...in the Northern Rocky Mountains and Pacific Northwest, impairment is primarily due to organics (*e.g.*, Glacier National Park in Montana); and in the intermountain West, sulfate, organics and elemental carbon are the main cause of impairment (*e.g.*, Grand Canyon National Park in Arizona) (Sisler *et al.*, 1993).”
- Page 8, Section A.4.f.: The Natural Resource Information System (NRIS) section should be updated. A BLM employee checked the NRIS website, <http://www.fs.fed.us/emc/nris/air/>, and found that it has not been updated since 05/09/2002.
- Page 8, Regulatory Development Since FLAG 2000 (New). Delete paragraph regarding Clean Air Interstate Rule given recent court ruling overturning the regulation.
- Page 8: “Regulatory Developments Since FLAG 2000 (*New*)”: In the draft document, there is no FLAG recognition of EPA’s new pending final rule titled “Prevention of Significant Deterioration New Source Review: Refinement of Increment Modeling Procedures” (Docket ID #EPA-HQ-OAR-2006-0888). This proposed rule effectively ignores hourly and daily spikes in FLAG areas of concern for the above pollutants and ultimately, visibility. EPA’s pending rule, when effective, will certainly worsen already negatively impacted visibility at numerous federally protected areas. Under this proposed rule, pollutant screening for sulfur dioxide, particulate matter and nitrogen oxides will eliminate time interval checks and allow emissions to be averaged over a year for regulatory compliance determinations. They are currently evaluated for 3 hour and 24 hour modeled PSD increment consumption. This pending final rule should be identified in FLAG 2008 and explain how FLMs will execute their “affirmative responsibility” for the Visibility AQRV with specific regard to this new EPA mandate.

- Page 20, line 1, editorial comment: "...SIPs must include either EPA-approved [d](#) provisions to comply with 40 CFR §51.307 for the non-attainment pollutant,..."
- Appendix V-1, Natural Visibility Conditions and Visibility Analysis Methods (*New*), should be placed at the end of the document along with the other appendices. Alternately, the contents of Appendix V-1 should be incorporated as part of the text of Section C.3., Visibility.
- Appendix B should be reviewed and updated as necessary—some of the items are out of date. For example, page 118 states "In July of 1997, EPA issued revised, and more stringent NAAQS for ozone and 'fine particulate matter' to address human health concerns." PM _{2.5} was revised in 2007 and ozone was revised in 2008. The document should reflect these revisions.
- Appendix B, page 119. Update the following language, it currently reads:
"Nevertheless, the appropriate role of the FLM in the PSD permit process is currently being addressed in EPA's proposed New Source Review Reform regulations. The final regulations are expected to be promulgated in 2001."
- Page 114, Glossary: insert a definition for Visibility